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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,570	07/16/2003	Kee-uk Jeon	Q75625	7104

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EXAMINER

DOWLING, WILLIAM C

ART UNIT PAPER NUMBER

2851

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/619,570	Applicant(s) JEON, KEE-UK	
	Examiner William C. Dowling	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Application filed 7/16/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 6 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b); by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 6 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Shimizu.

Shimizu discloses DMD projection apparatus comprising:

a DMD (20) wherein a normal plane to both perpendicular sides of the movable rectangular mirror elements is parallel to an optical axis of a light source (28);

a first mirror surface (5) to reflect light from the light source;

a second reflective mirror surface(6) for receiving light from the first reflective surface to reflect light to the mirror elements, where the optical path does not cross a normal to the panel until incidence;

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an optical integrator (30) for transforming a circular beam from the light source into a desired rectangular beam.

As noted in Column 5 Line 21, the DMD may having unequal lengths.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawamura in view of Prior Art figure 1.

Sawamura discloses DMD projection apparatus comprising:

a DMD (3) wherein a normal plane to both perpendicular sides of the movable rectangular mirror elements is parallel to an optical axis of a light source (1);

a first mirror surface (14) to reflect light from the light source;

a second reflective mirror surface (21b) for receiving light from the first reflective surface to reflect light to the mirror

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elements, where the optical path does not cross a normal to the panel until incidence;

Prior Art Figure 2 teaches the known use of DMD's with a longer and shorter side.

It would have been obvious to one skilled in the art to modify the optical arrangement for use with rectangular pixels, as taught in the Prior Art, in order to obtain a more compact optical path.

5. Claims 1-2, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shouji in view of Prior Art Figure 1.

Shouji discloses DMD projection apparatus comprising:

a DMD wherein a normal plane to both perpendicular sides of the movable rectangular mirror elements is parallel to an optical axis of a light source (1);

a first mirror surface (5) to reflect light from the light source;

a second reflective mirror surface (6) for receiving light from the first reflective surface to reflect light to the mirror elements, where the optical path does not cross a normal to the panel until incidence;

an optical integrator (3a) for transforming a circular beam from the light source into a desired rectangular beam.

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Prior Art Figure 2 teaches the known use of DMD's with a longer and shorter side.

It would have been obvious to one skilled in the art to modify the optical arrangement for use with rectangular pixels, as taught in the Prior Art, in order to obtain a more compact optical path.

Allowable Subject Matter

6. Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Dowling whose telephone number is 703-308-1287. The examiner can normally be reached on Mon.-Thurs.

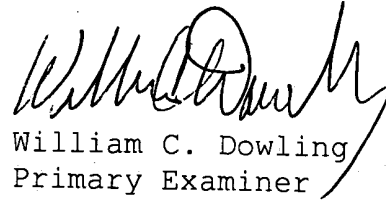
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.

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A handwritten signature in black ink, appearing to read 'William C. Dowling', is written over the printed name and title.

William C. Dowling
Primary Examiner
Art Unit 2851

wcd